

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Yuichi YAMAMOTO et al. : **Attn: BOX PCT**  
Serial No. [NEW] : **Docket No. 2002-0031A**  
Filed January 16, 2002 :  
METHOD FOR THE PRODUCTION OF :  
SEALING TOOL STERILIZED WITH :  
GASEOUS HYDROGEN PEROXIDE :  
[Corresponding to PCT/JP01/04039 :  
Filed May 15, 2001]

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEE FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975.

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents,  
Washington, DC 20231

Sir:

In the interest of compact prosecution and to reduce PTO filing fees, please amend the present application as follows:

**IN THE CLAIMS:**

*Please amend claims 4 to 11 as follows:*

4. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises setting the number of repetitions of the aeration pulse to be carried out next to a sterilization pulse in the sterilization treatment to be 30 pulses or more.

5. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises setting the number of repetitions of the aeration pulse to be 5 to 50 pulses or more.

ATTACHMENT E

6. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises setting the sterilization pulses and the aeration pulses to be, in advance, conducted in combination.

7. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises setting an outer bag further accommodating the sterilization bag having the article to be processed to be mounted in a porous container for mounting with a volume rate of 12 to 55 %, thereby carrying out the sterilization treatment.

8. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises setting the article to be processed to be at least one member selected from a rubber cap, a rubber gasket, a gasket for a piston (plunger) to be inserted into an injection cylinder (syringe), a tool for preventing liquid leakage such as rubber boots, and an elastic ring for a bushing and for fitting a joint.

9. **(Amended)** The method for the production of a sealing member as set forth in claim 1, which comprises rubber being at least one member selected from the following conjugated diene rubber and non-conjugated diene rubber: the conjugated diene rubber being natural rubber, a variety of synthetic rubber materials, blends each comprising at least two of these natural and synthetic rubber materials and copolymer rubber comprising repeating units of these rubber materials and other repeating units copolymerizable therewith, wherein the synthetic rubber comprises 1,4-cis-polyisoprene rubber obtained by 1,4-addition polymerization of isoprene, which is a repeating unit mainly constituting the natural rubber, 1,4-cis-polybutadiene rubber and isobutene-isoprene copolymer rubber; the non-conjugated diene rubber being copolymer rubber materials of at least two 1-olefins or multi-component copolymer rubber materials obtained by copolymerizing these monomers with third non-conjugated dienes, wherein the copolymer rubber materials of at least two 1-olefins is at least one member selected from the group consisting of ethylene-propylene (copolymer) rubber, ethylene-1-butene copolymer rubber and

propylene-1-butene copolymer rubber, and wherein the multi-component copolymer rubber obtained by copolymerizing these monomers with a third non-conjugated diene is at least one member selected from the group consisting of ethylene-propylene-1,4-hexadiene copolymer rubber, ethylene-propylene-methylene norbornene copolymer rubber and ethylene-propylene-ethylidene norbornene copolymer rubber.

10. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises the thermoplastic elastomer (thermoplastic rubber) being a polymer or a kneaded composition (kneaded mixture) of at least two polymers, which simultaneously has characteristic properties of thermoplastic resin and elastomer; the polymer composition, which can be formed into a variety of shapes as set forth in the molding method applicable to the resin and can be subjected to vulcanization treatment (crosslinking treatment) applicable to the elastomer, is at least one kneaded composition selected from the group consisting of kneaded compositions of polyolefin resins and ethylene-propylene (copolymer) rubber, kneaded compositions of polyolefin resins and ethylene-propylene-non-conjugated diene copolymer rubber and kneaded compositions of propylene-1-butene copolymer resins and ethylene-propylene-non-conjugated diene copolymer rubber.

11. **(Amended)** The method for the production of a sealing tool as set forth in claim 1, which comprises the thermoplastic elastomer being a thermally kneaded composition comprising at least one member selected from the group consisting of polyethylene resins, polypropylene resins, poly-1-butene resins, poly-4-methyl-1-pentene resins and poly-1-hexene resins; and at least one member selected from the group consisting of ethylene-propylene-1,4-hexadiene copolymer rubber, ethylene-propylene-methylene norbornene copolymer rubber and ethylene-propylene-ethylidene norbornene copolymer rubber.

**REMARKS**


The above amendment is presented to eliminate multiple dependent claims, thereby reducing PTO filing fees.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is entitled "**Version with Markings to Show Changes Made**".

Favorable action on the merits is now requested.

Respectfully submitted,

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## VERSION WITH MARKINGS TO SHOW CHANGES MADE

### IN THE CLAIMS:

*Please amend claims 4 to 11 as follows:*

4. **(Amended)** The method for the production of a sealing tool as set forth in [any one of claims 1 to 3] claim 1, which comprises setting the number of repetitions of the aeration pulse to be carried out next to a sterilization pulse in the sterilization treatment to be 30 pulses or more.
5. **(Amended)** The method for the production of a sealing tool as set forth in [any one of claims 1 to 3] claim 1, which comprises setting the number of repetitions of the aeration pulse to be 5 to 50 pulses or more.
6. **(Amended)** The method for the production of a sealing tool as set forth in [any one of claims 1 to 4] claim 1, which comprises setting the sterilization pulses and the aeration pulses to be, in advance, conducted in combination.
7. **(Amended)** The method for the production of a sealing tool as set forth in [any one of claims 1 to 5] claim 1, which comprises setting an outer bag further accommodating the sterilization bag having the article to be processed to be mounted in a porous container for mounting with a volume rate of 12 to 55 %, thereby carrying out the sterilization treatment.
8. **(Amended)** The method for the production of a sealing tool as set forth in [any one of claims 1 to 5] claim 1, which comprises setting the article to be processed to be at least one member selected from a rubber cap, a rubber gasket, a gasket for a piston (plunger) to be inserted into an injection cylinder (syringe), a tool for preventing liquid leakage such as rubber boots, and an elastic ring for a bushing and for fitting a joint.
9. **(Amended)** The method for the production of a sealing member as set forth in

[any one of claims 1 to 7] claim 1, which comprises rubber being at least one member selected from the following conjugated diene rubber and non-conjugated diene rubber: the conjugated diene rubber being natural rubber, a variety of synthetic rubber materials, blends each comprising at least two of these natural and synthetic rubber materials and copolymer rubber comprising repeating units of these rubber materials and other repeating units copolymerizable therewith, wherein the synthetic rubber comprises 1,4-cis-polyisoprene rubber obtained by 1,4-addition polymerization of isoprene, which is a repeating unit mainly constituting the natural rubber, 1,4-cis-polybutadiene rubber and isobutene-isoprene copolymer rubber; the non-conjugated diene rubber being copolymer rubber materials of at least two 1-olefins or multi-component copolymer rubber materials obtained by copolymerizing these monomers with third non-conjugated dienes, wherein the copolymer rubber materials of at least two 1-olefins is at least one member selected from the group consisting of ethylene-propylene (copolymer) rubber, ethylene-1-butene copolymer rubber and propylene-1-butene copolymer rubber, and wherein the multi-component copolymer rubber obtained by copolymerizing these monomers with a third non-conjugated diene is at least one member selected from the group consisting of ethylene-propylene-1,4-hexadiene copolymer rubber, ethylene-propylene-methylene norbornene copolymer rubber and ethylene-propylene-ethylidene norbornene copolymer rubber.

10. (**Amended**) The method for the production of a sealing tool as set forth in [any one of claims 1 to 8] claim 1, which comprises the thermoplastic elastomer (thermoplastic rubber) being a polymer or a kneaded composition (kneaded mixture) of at least two polymers, which simultaneously has characteristic properties of thermoplastic resin and elastomer; the polymer composition, which can be formed into a variety of shapes as set forth in the molding method applicable to the resin and can be subjected to vulcanization treatment (crosslinking treatment) applicable to the elastomer, is at least one kneaded composition selected from the group consisting of kneaded compositions of polyolefin resins and ethylene-propylene (copolymer) rubber, kneaded compositions of polyolefin resins and

ethylene-propylene-non-conjugated diene copolymer rubber and kneaded compositions of propylene-1-butene copolymer resins and ethylene-propylene-non- conjugated diene copolymer rubber.

11. **(Amended)** The method for the production of a sealing tool as set forth in [any one of claims 1 to 9] claim 1, which comprises the thermoplastic elastomer being a thermally kneaded composition comprising at least one member selected from the group consisting of polyethylene resins, polypropylene resins, poly-1-butene resins, poly-4-methyl-1-pentene resins and poly-1-hexene resins; and at least one member selected from the group consisting of ethylene-propylene-1,4-hexadiene copolymer rubber, ethylene-propylene-methylene norbornene copolymer rubber and ethylene-propylene-ethylidene norbornene copolymer rubber.